

Appl. No. 10/627,615  
Amdt. Dated July 11, 2005  
Reply to Office Action of May 9, 2005

**Amendments to the Specification:**

Please replace paragraph [0011] with the following amended paragraph:

[0011] The present invention relates to a sensor array for an intrusion detection system. According to the present invention, the sensor array includes ~~one or more~~ at least two sensor nodes, a corresponding node processor at each sensor node, and a deformable cable ~~that are each connected to an array processor~~. Each sensor node includes one or more discrete sensors, which are classified as volumetric sensors or non-volumetric sensors. The discrete volumetric sensors each have an associated volumetric intrusion detection field extending therefrom and are constructed and arranged to generate a response to an intruder entering its detection field. Each sensor node situated and spaced along a deformable cable and in the sensor array has a volumetric detection zone defined by the effective detection fields of its constituent sensors as constructed and arranged in each sensor node. The volumetric detection zone extends transversely to the longitudinal direction of the deformable cable at the sensor node. The array processor is coupled to each sensor-node processor for generating information based on processing of the response generated from the detection zone of each sensor node. Whenever an intruder enters the detection zone of a sensor node, one or more of the discrete sensors of the sensor node generates a response representative of the presence of an intruder. ~~An array processor receives the response in the form of a response signal. The array processor signal processes the response received from each discrete sensor and generates an alarm disturbance signature.~~

Please replace paragraph [0018] with the following amended paragraph:

[0018] In a first aspect the present invention provides ~~a sensor array forming part of an intrusion detection system and having a plurality of discrete volumetric sensors each having an associated volumetric intrusion detection field extending therefrom and~~

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~~constructed and arranged to generate a response to an intruder entering its detection field, the sensor array comprising: a plurality of sensor nodes each having at least one volumetric sensor and having a detection zone defined by the effective detection fields of its constituent sensors as constructed and arranged in each sensor node, at least one of the sensor nodes having at least two volumetric sensors; and an array processor coupled to each sensor node for generating information based on processing of the response generated from the detection zone of each sensor node~~ sensor array forming part of an intrusion detection system and having a plurality of discrete volumetric sensors each having an associated volumetric intrusion detection field extending therefrom and constructed and arranged to generate a response to an intruder entering its detection field, the sensor array comprising:

a deformable cable;

a plurality of sensor nodes situated and spaced along the deformable cable, each sensor node having at least one discrete volumetric sensor having a detection field and at least one of the sensor nodes having at least two discrete volumetric sensors, each sensor node having a volumetric detection zone defined by the detection fields of its constituent sensors as constructed and arranged in each sensor node, the volumetric detection zone extending transversely to the longitudinal direction of the deformable cable at the sensor node; and

a plurality of node processors, each corresponding to one of the plurality of sensor nodes and situated thereat, for generating information based on processing of the response generated from the detection zone of the constituent sensors.

Please replace paragraph [0019] with the following amended paragraph:

[0019] ~~In a second aspect the present invention provides a sensor array forming part of an intrusion detection system and having a plurality of discrete volumetric sensors each having an associated volumetric intrusion detection field extending therefrom and constructed and arranged to generate a response to an intruder entering its detection field,~~

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~~the sensor array comprising: (i) a plurality of sensor nodes each sensor node having at least one volumetric sensor and having a detection zone defined by the effective detection fields of its constituent sensors as constructed and arranged in each sensor node, at least one of the sensor nodes having at least two volumetric sensors, and each sensor node having a node processor for generating an alarm disturbance signature based on the response generated each volumetric sensor of the sensor node, the node processor being coupled to each volumetric sensor; and (ii) an array processor for generating information based on the alarm disturbance signature received from each node processor, the array processor being coupled to the node processor of each sensor node~~ sensor array forming part of an intrusion detection system and having a plurality of discrete volumetric sensors each having an associated volumetric intrusion detection field extending therefrom and constructed and arranged to generate a response to an intruder entering its detection field,  
the sensor array comprising:

- (i) a deformable cable;
- (ii) a plurality of sensor nodes situated and spaced along the deformable cable, each sensor node having at least one volumetric sensor having a detection field and at least one of the sensor nodes having at least two discrete volumetric sensors, each sensor node having a volumetric detection zone defined by the detection fields of its constituent sensors as constructed and arranged in each sensor node, the volumetric detection zone extending transversely to the longitudinal direction of the deformable cable at the sensor node, and each sensor node having a node processor situated thereat for generating an alarm disturbance signature based on the response generated by each volumetric sensor of the sensor node; and
- (iii) an array processor for generating information based on the alarm disturbance signature received from each node processor, the array processor being coupled to the node processor of each sensor node.

Please replace paragraph [0020] with the following amended paragraph:

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[0020] In a third aspect, the present invention provides an ~~intrusion detection system~~ comprising: ~~(I) at least one sensor array having a plurality of discrete volumetric sensors each having an associated volumetric intrusion detection field extending therefrom and constructed and arranged to generate a response to an intruder entering its detection field; the system having: (i) a plurality of sensor nodes each sensor node having at least one volumetric sensor and having a detection zone defined by the effective detection fields of its constituent sensors as constructed and arranged in each sensor node, at least one of the sensor nodes having at least two volumetric sensors, and each sensor node having a node processor for generating an alarm disturbance signature based on the response generated each volumetric sensor of the sensor node, the node processor being coupled to each volumetric sensor; and (ii) an array processor for generating information based on the alarm disturbance signature received from each node processor, the array processor being coupled to the node processor of each sensor node; (II) a calibration means for adjusting the sensitivity setting of each discrete sensor; and (III) a system processor for processing the information received from the array processor and for generating an alarm condition; wherein the calibrating system is coupled to the system controller, and wherein the system controller is coupled to each sensor array~~ intrusion detection system comprising:

(I) at least one sensor array having a plurality of discrete volumetric sensors each having an associated volumetric intrusion detection field extending therefrom and constructed and arranged to generate a response to an intruder entering its detection field, the system having:

(i) a deformable cable;

(ii) a plurality of sensor nodes situated and spaced along the deformable cable, each sensor node having at least one volumetric sensor having a detection field and at least one of the sensor nodes having at least two discrete volumetric sensors, each sensor node having a volumetric detection zone defined by the detection fields of its constituent sensors as constructed and arranged in each sensor node, the volumetric detection

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zone extending transversely to the longitudinal direction of the deformable cable at the sensor node, and each sensor node having a node processor situated thereat for generating an alarm disturbance signature based on the response generated each volumetric sensor of the sensor node; and  
(iii) an array processor for generating information based on the alarm disturbance signature received from each node processor, the array processor being coupled to the node processor of each sensor node;  
(II) a calibration means for adjusting the sensitivity setting of each discrete sensor; and  
(III) a system controller for processing the information received from the array processor and for generating an alarm condition;  
wherein the calibrating system is coupled to the system controller, and wherein the system controller is coupled to each sensor array.